A.S.D GOVT. DEGREE COLLEGE FOR WOMEN (A),

(Re- Accredited by NAAC with B Grade)

Jagannaickpur, Kakinada-533002, East Godavari, AP

DEPARTMENT OF ZOOLOGY & AQUACULTURE TECHNOLOGY

2019-2020

Model Presentation

On the Eve of

National Science Day

ASD Govt. Degree College for Women (A)

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DEPARTMENT OF AQUACULTURE TECHNOLOGY

2019-2020

MODEL PRESENTATION

The department of aquaculture technology had organized a models displayed by III B.Sc CBZ) and ICZAqt students on the occasion of national science day. The following students had participated in the model presentation on 28-02-2020 at 2 P.M in zoology lab.

Signature of the lecturer

N. Veera Shanthi

B. Boris

ASD Govt. Degree College for Women (A)

Jagannaickpur, Kakinada

Activity register 2019-20

Date	28-02-2020
Conducted through (DRC/JKC/NCC/NSS/Department)	**Aquaculture Technology**
Nature of Activity (Seminar/Workshop/Extn. Lecturer ect.)	**National science day celebrations**
Title of the Activity	**Model presentation**
Name of the Department/Committee	**Aquaculture Technology**
No. of Students Participated	**46**
Brief Report on the Activity	**Students certainly benefit by themselves when they are participated in .They can know how to gather information relevant to the topic**
Name of the Lecturers who Planned & Conducted the Activity	**N. Veera Chanti**
Signature of the in Charge	28/2/2020.
Signature of the Principal	PRINCIPAL A.S.D.GOVT.DEGREE COLLEGE (W) AUTONOMOUS KAKINADA
Remarks	

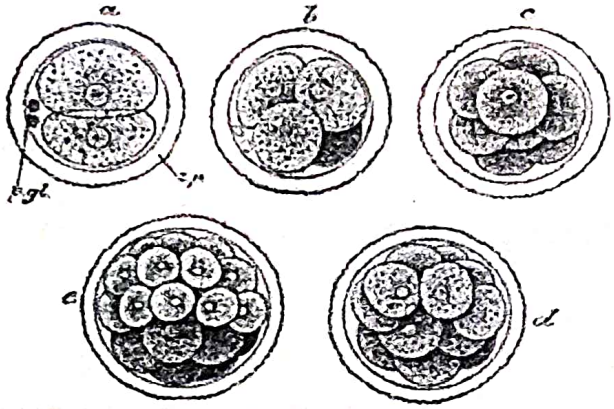

HEART

Embryonic development

Embryonic development also **mbryogenesis** is the process by which the embryo forms and develops. In mammals, the term refers chiefly to early stages of prenatal development, whereas the terms fetus and fetal development describe later stages.

Embryonic development starts with the fertilization of the egg cell (ovum) by a sperm cell, (spermatozoon). Once fertilized, the ovum is referred to as a zygote, a single diploid cell. The zygote undergoes mitotic divisions with no significant growth (a process known as cleavage) and cellular differentiation, leading to development of a multicellular embryo.

Although embryogenesis occurs in both animal and plant development, this article addresses the common features among different animals, with some emphasis on the embryonic development of vertebrates and mammals.



Cell divisions (cleavage)

Cell division with no significant growth, producing a cluster of cells that is the same size as the original zygote, is called cleavage. At least four initial cell divisions occur, resulting in a dense ball of at least sixteen cells called the morula. The different cells derived from cleavage, up to the blastula stage, are called blastomeres. Depending mostly on the amount of yolk in the egg, the cleavage can be holoblastic (total) or meroblastic (partial).[2]

Holoblastic cleavage occurs in animals with little yolk in their eggs, such as humans and other mammals who receive nourishment as embryos from the mother, via the placenta or milk, such as might be secreted from a marsupium. On the other hand, meroblastic cleavage occurs in animals whose eggs have more yolk (i.e. birds and reptiles). Because cleavage is impeded in the vegetal pole, there is an uneven distribution and size of cells, being more numerous and smaller at the animal pole of the zygote.[2]

In holoblastic eggs the first cleavage always occurs along the vegetal-animal axis of the egg, and the second cleavage is perpendicular to the first. From here the spatial arrangement of blastomeres can follow various patterns, due to different planes of cleavage, in various organisms:

Cleavage patterns followed by holoblastic and meroblastic eggs

Holoblastic	Meroblastic

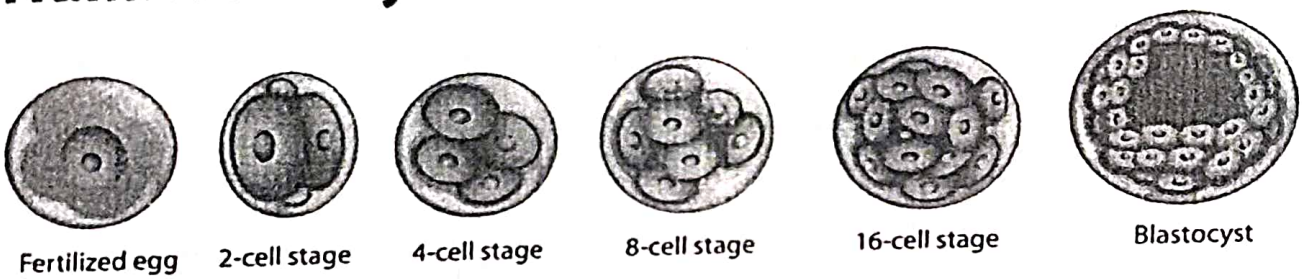
Main article: Organogenesis

Human embryo, 8-9 weeks, 38 mm

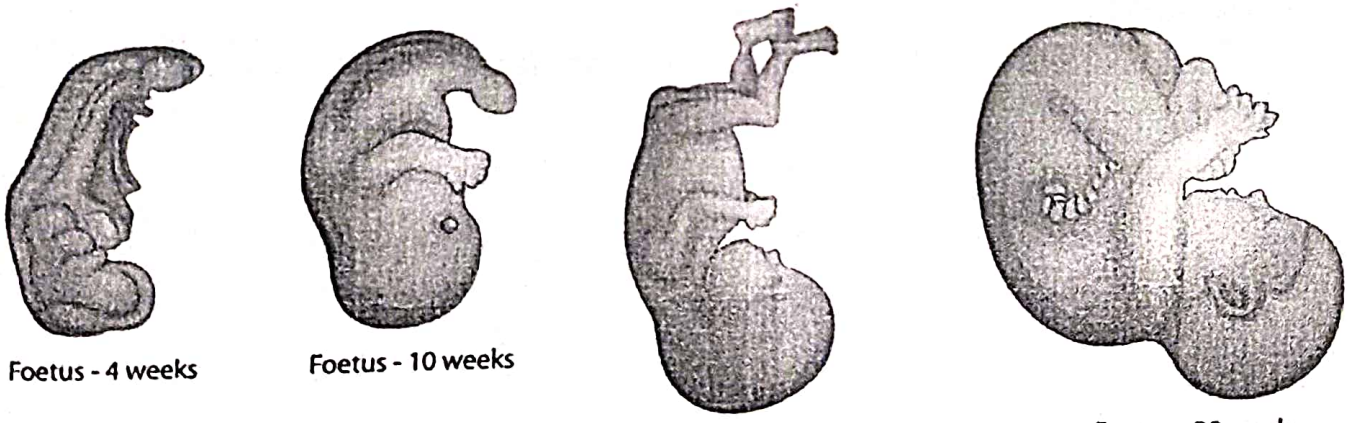
At some point after the different germ layers are defined, organogenesis begins. The first stage in vertebrates is called neurulation, where the neural plate folds forming the neural tube (see above).[2] Other common organs or structures that arise at this time include the heart and somites (also above), but from now on embryogenesis follows no common pattern among the different taxa of the animal kingdom.

In most animals organogenesis, along with morphogenesis, results in a larva. The hatching of the larva, which must then undergo metamorphosis, marks the end of embryonic development.

Human Embryonic and Foetal Development



Fertilized egg | 2-cell stage | 4-cell stage | 8-cell stage | 16-cell stage | Blastocyst



Foetus - 4 weeks | Foetus - 10 weeks | Foetus - 16 weeks | Foetus - 20 weeks

The structure of the heart

If you clench your hand into a fist, this is approximately the same size as your heart. It is located in the middle of the chest and slightly towards the left.

The heart is a large muscular pump and is divided into two halves - the **right-hand side** and the **left-hand side**.

The **right-hand side** of the heart is responsible for pumping deoxygenated blood to the lungs.

The **left-hand side** pumps oxygenated blood around the body.

Each side of the heart consists of an **atrium** and a **ventricle** which are two connected chambers.

The **atria** (plural of atrium) are where the blood collects when it enters the heart.

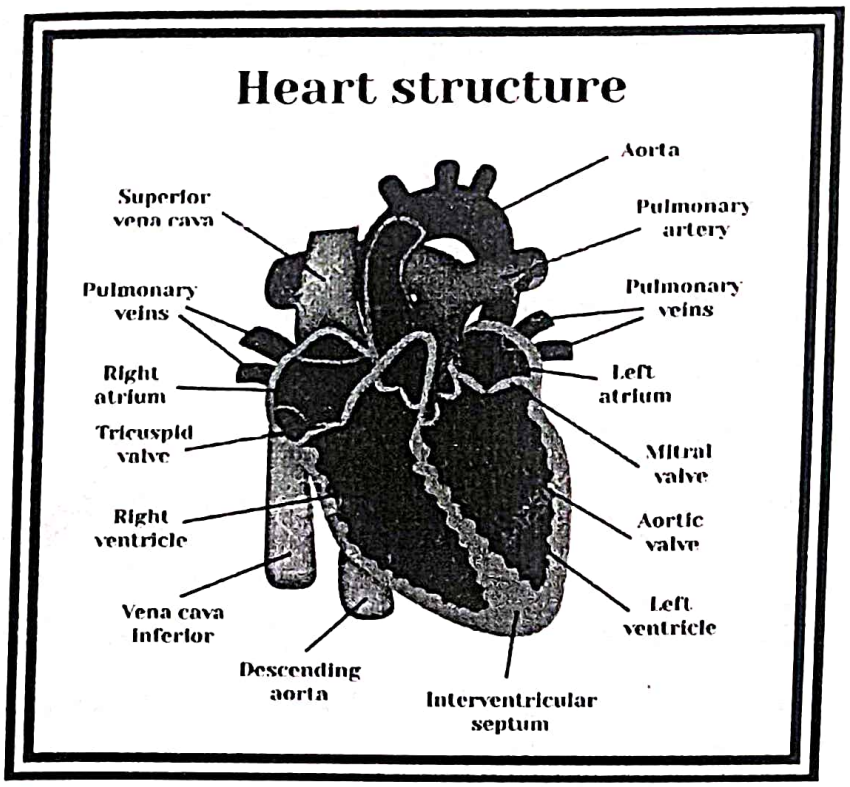
The **ventricles** pump the blood out of the heart to the lungs or around the body.

The **septum** separates the right-hand and left-hand side of the heart.

The **tricuspid valve** is located between the right atrium and right ventricle and opens due to a build-up of pressure in the right atrium.

The **bicuspid valve** is located between the left atrium and left ventricle and likewise opens due to a build-up of pressure, this time in the left atrium.

The **semilunar valves** stop the back flow of blood into the heart. There is a semilunar valve where the aorta leaves the left ventricle and another where the pulmonary artery leaves the right ventricle.

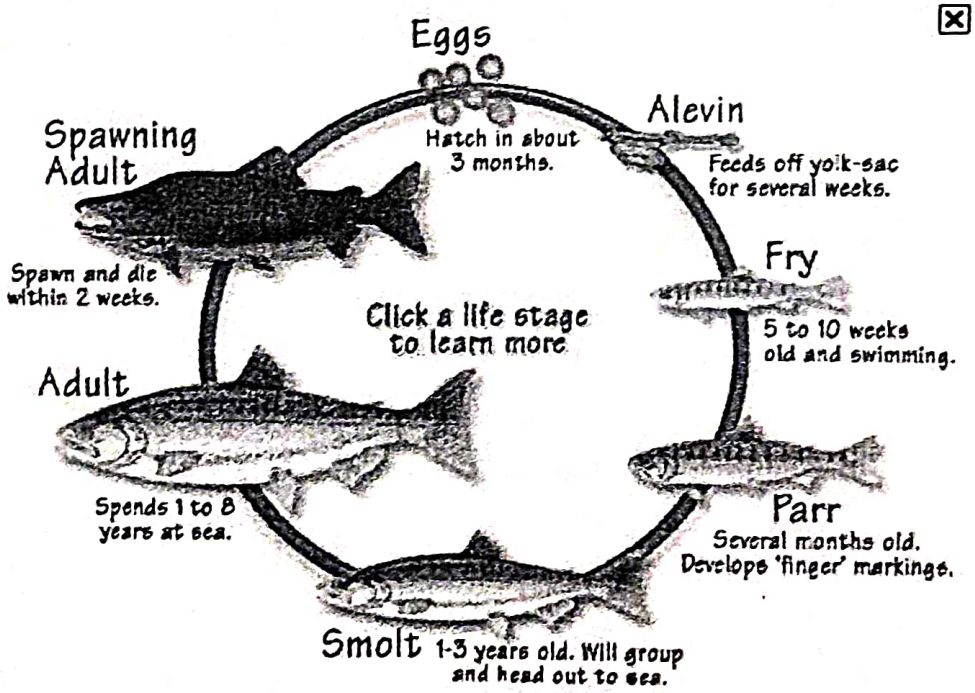


Fish life cycles vary among species. In general, however, fish progress through the following life cycle stages:

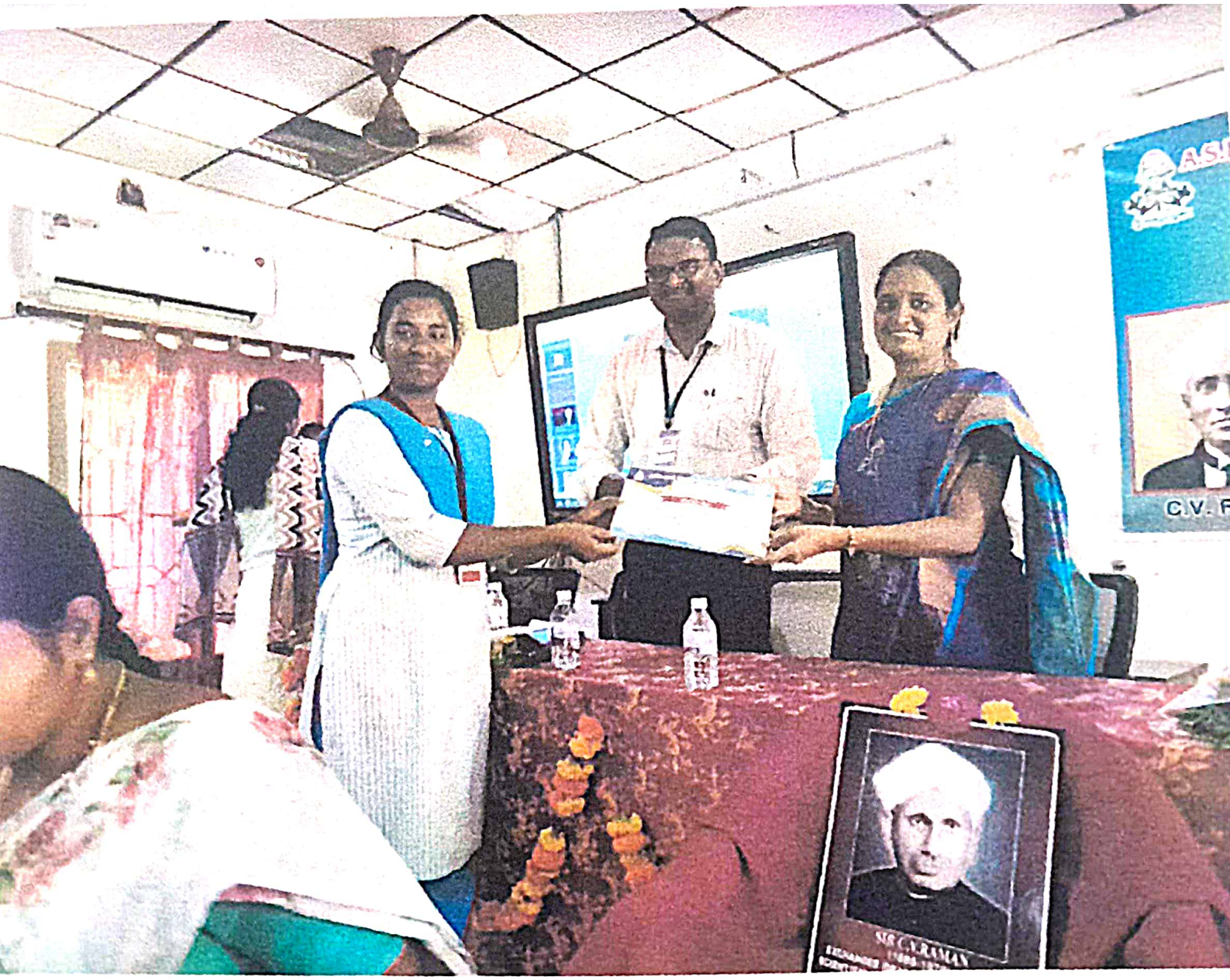
- **Eggs:** Fertilized eggs develop into fish. Most eggs do not survive to maturity even under the best conditions. Threats to eggs include changes in water temperature and oxygen levels, flooding or sedimentation, predators and disease.
- **Larval:** Larval fish live off a yolk sac attached to their bodies. When the yolk sac is fully absorbed, the young fish are called fry.
- **Fry:** Fry are ready to start eating on their own. Fry undergo several more developmental stages, which vary by species, as they mature into adults. Young fish are generally considered fry during their first few months (during their first few months to just less than one year in some species).
- **Juvenile:** The time fish spend developing from fry into reproductively mature adults varies among species. Most fish do not survive to become adults. Threats to survival include

fluctuations in water temperature, changes in oxygen levels, competition for habitat and predators.

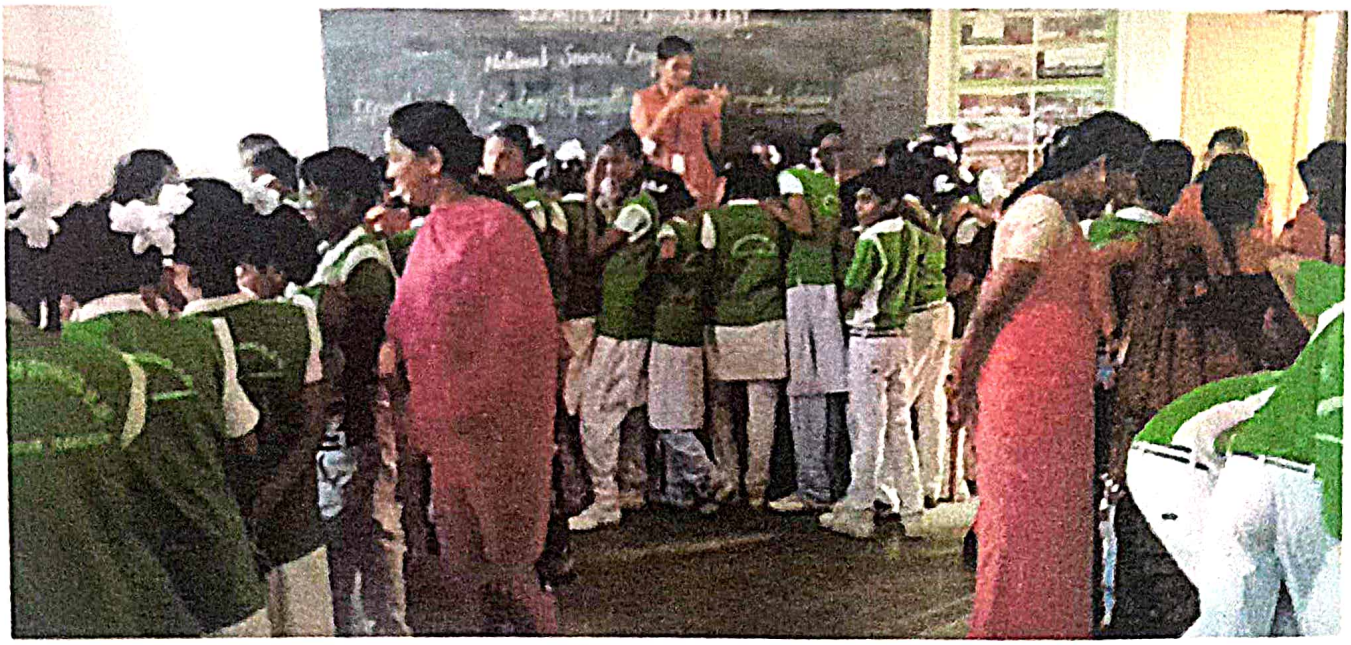
- **Adult:** When fish are able to reproduce, they are considered adults. The time it takes to reach maturity varies among species and individual fish. Fish with shorter life spans reach maturity faster. For example, female round gobies mature in approximately one year and live for two to three years. Lake sturgeon can live from 80-150 years, but females don't reach maturity until they are approximately 25 years old.
- **Spawning:** Female fish release eggs into the water (either into the water column or into a nest) and male fish fertilize eggs by releasing milt. Not all eggs are fertilized. Some fish spawn each year after reaching maturity, others spawn at intervals (every four years, for example), while others spawn only once and then die.




C.V. R
SIR C.V.RAMAN


SIR C.V.RAMAN

St. Xavier students & Faculty Numbers participated in this Event-



Science day

28/02/2021

Larval Development of fish

Model

A.S.D.GOVT.DEGREE COLLEGE FOR WOMEN (A)

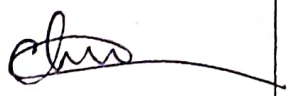
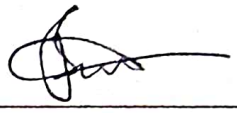
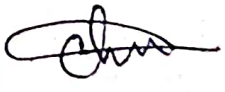
DEPARTMENT OF AQUA CULTURE

LIST OF VISITORS

NATIONAL SCIENCE DAY CELEBRATIONS

S. No	Name Of The Visitor With Address	Comments	Signature
3.	V. Ananthi Lakshmi Lec. in chemistry.	Very good & Informative	V. A Lx
	SRIDEVI. G.	L/ Physics.	28/2/2020.
	P. Sanjotha Lec in Eglish	Very informative	
	M. Subbalakshmi C/Lin chemistry	very good	M. Subba
	Lt. G. PRAMILA RANI Physical Director	Marveleous	28/2/2020
	G. Satya Sunetha	Vely good. Excellent work done by students	Sunetha 28/2/2020
	Swarna Sri Y	Very productive work & excellent presentations	Swarna 28/02/2020.

S. No	Name Of The Visitor With Address	Comments	Signature
	N. Pushpa Dept. of Botany	very. Good	N. Pushpa
	B. Sonia Lec in Zoology	Excellent	
	K. Rabai akshmi		
	K. Chandini	Excellent .	
	M. Rajeswari	V. good.	
	S. Hymavathi	V. good.	
	P Srinivasi	Very good.	
	Y. Uma Vbrama Sica	Good -	
	P. Sowjanya	excellent .	

S. No	Name Of The Visitor With Address	Comments	Signature
	Ch. Madhavi	Good.	
	P. Kamakshi	very good.	
	N. Sowjanya.	Excellent.	
	D. Satyasri	V. good	
	D. Mounika.	good.	
	B. Sowjna.	good	
	P. Mamatha.	Excellent	
	Ch. Madhuri	Good	
	K. Suguna Bharathi	very good	

S. No	Name Of The Visitor With Address	Comments	Signature
1.	P. Vasu Varma	Very good	P. Vasu Varma.
2.	P. Dhanush Teja	Very Good	P. Dhanush.
3.	Krishana chaitanya	excellent	K. Krishana chaitanya
4)	M. Srinivas	excellent	M. Jyothi.
5)	M. Mahesh	excellent	M. Mahesh
6)	SD. Jafar Ali	excellent	SD. Jafar
7	English and Social M. Mary Grace olivi	excellent	Faculty
8	V. sudhakani P	Excellent	faculty
9	M. YASwanth	excellent	

S. No	Name Of The Visitor With Address	Comments	Signature
10	J. Yaswanth	very good	
11	K. Vinay	very good	
12	R. Ram Satish	Good	
13	Dilip	excellent	
	P. mukesh	excellent	
	V. Kowshik	V. good excellent	
	I. chaitanya Teja	V. good excellent	
	P. Prabhas	V good excellent	
18.	D. Vijay	V very good excellent	

o	Name Of The Visitor With Address	Comments	Signature
	D. Hema Kasturi	Excellent	Kasturi
	G. Jashnavi	Excellent	G. Jashnavi
	D. Reshma	Excellent	
	M. Praveela	excellent	
	P. Prasanna	Excellent	
	S.N.D. Jyothi	Excellent	Faculty
	P. Madhu Shalini	Excellent	
	M. Jessica	excellent	
	Ch. Harika	Excellent	

S. No	Name Of The Visitor With Address	Comments	Signature
	T. Mahalaxmi	Excellent & Mind block, Kiraks	T. Mahal.
	K. Mahalakshmi	Excellent.	K. Mahalakshmi
	S. Sanika	Excellent	S. Sanika
	P. Hema	Excellent	P. Hema
	P. Sirisha	excellent	P. Sirisha
	N. Vijaya Mounika	Excellent Models	N. V. Mounika

ASD Degree colleg for women Kakinada
Science day celebration in Feb 28-03-2020

Name of the student	Group	Signature
K.L. Sai Lalitha	C2 Agt	K.L. Sai Lalitha
A. Santhi Rupa	C2 Agt	A. Santhi Rupa
M. Suguna	C2 Agt	M. Suguna
M. Bharathi	C2 Agt	Bharathi. M
M. Chandhini	C2 Agt	Chandhini M
L. Durga Bhavani	C2 Agt	L. Durgabhavani
G.H.V.L. Phanee	C2 Agt	G.H.V.L. Phaneendra
M. Lakshimi	C2 Agt	M. Lakshmi
B.N.D. Lakshimi	C2 Agt	
Ch. Harshitha	C2 Agt	Ch. Harshitha
V. Keerthana	C2 Agt	V. Keerthana
B.P.K. ch. Kumari	C2 Agt	B.P.K. ch. Kumari
P. Pushpa Latha	C2 Agt	P. pushpa latha
D. Srivani	C2 Agt	D. Srivani
P. Suguna Kumari	C2 Agt	P. Suguna Kumari
N. Usha Rani	C2 Agt	N. usha Rani
B. Vennisha Rani	C2 Agt	B. Vennisha Rani